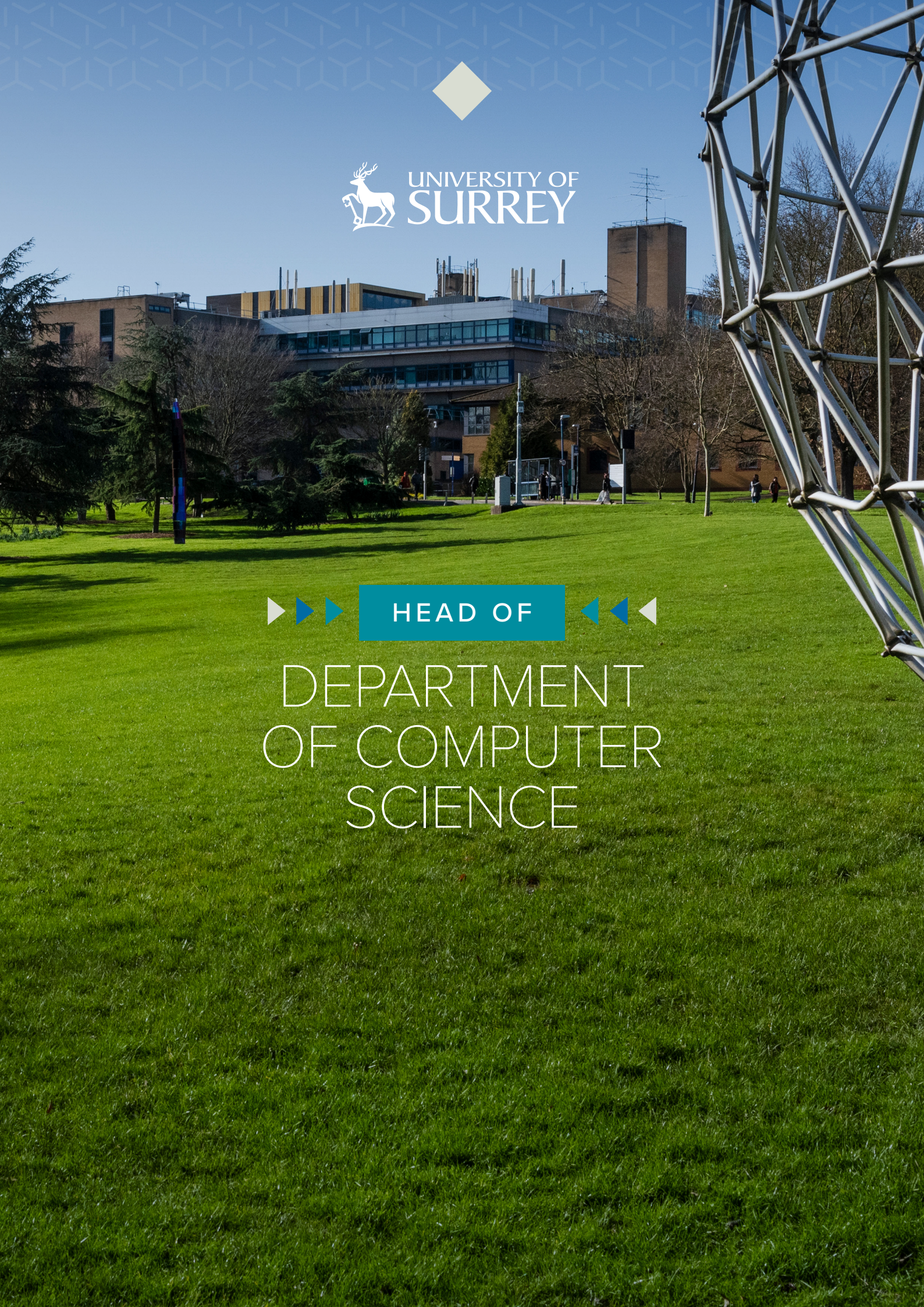
UNIVERSITY OF SURREY

HEAD OF

DEPARTMENT OF COMPUTER SCIENCE


UNIVERSITY OF
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ENTER

A WORLD OF COLLABORATION

SURREY IS MADE UP OF MANY TALENTED INDIVIDUALS WHO MAKE US A GREAT INSTITUTION. AND WORKING TOGETHER, AND CONNECTING WITH EXTERNAL INSTITUTIONS, BUSINESSES AND GOVERNMENT MAKE US EVEN STRONGER.

Since the University's founding in the 1960s, and before that at Battersea College, our community has thrived on strong connections with the world outside our campus. This spirit of collaboration is evident across the University today at every level. It informs our teaching, adds value to our research and increases our impact – connecting people with ideas, students with opportunities and businesses with technology.

Collaboration begins with the connections we make in our community, supporting projects that make a difference locally, and extends to our global partnerships that are enabling transformative research in areas such as 5G and 6G, AI, cyber security, cancer treatment and sustainable tourism.

Around the globe and beyond, Surrey plays a significant role. We were one of only a few UK universities invited to take part in the GREAT Festival of Innovation in Hong Kong, a wonderful forum for collaboration and interdisciplinary discussion on technologies that will drive the UK's future economic growth. We also saw the first successful deployment of the RemoveDEBRIS satellite, a project we are leading with a consortium of space sector organisations.

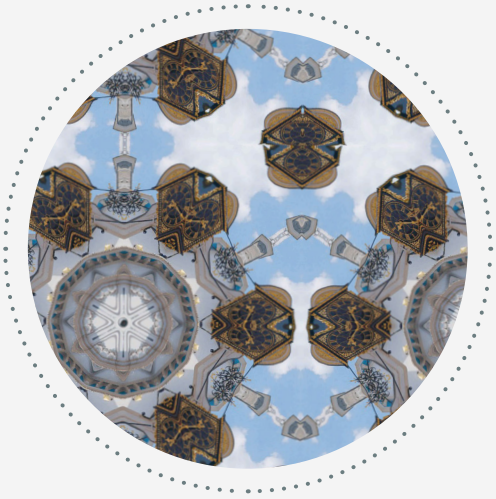
There's real energy, momentum and ambition to Surrey. It's always been part of us, and I'm excited to be able to share with you how we're taking that energy forwards into the future.

These collaborations, and many others, are bringing improvements across a diverse range of fields, and new connections are propelling us in surprising directions. At Surrey, we are continuously redefining and joining together the many spheres that surround us – from real worlds to virtual ones, and from the worlds inside ourselves to those at the farthest reaches of our imagination.

Professor G Q Max Lu AO DL FAA FTSE
President and Vice-Chancellor
University of Surrey

OUR WORLDS OF COLLABORATION

SURREY IS AN INTERCONNECTED NETWORK OF INTELLIGENCE, INNOVATION AND DISCOVERY – AND THE EFFECTS OF THE CONNECTIONS WE MAKE WITH THE OUTSIDE WORLD CAN BE FELT LOCALLY, INTERNATIONALLY AND IN WORLDS BEYOND OUR OWN.

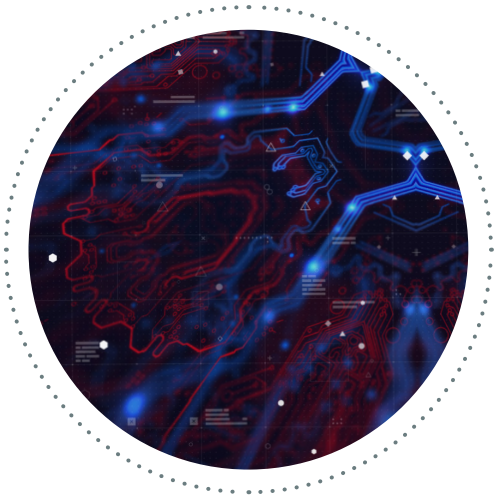


LOCAL

It starts with the active role we play in the community on our doorstep.

INTERNATIONAL

We see opportunities rather than boundaries, making connections across the world in our quest for new discoveries.

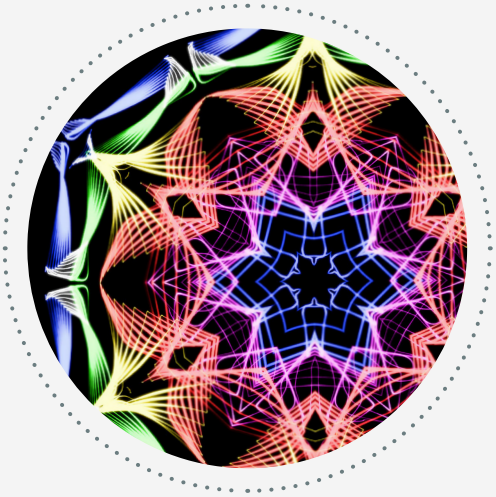


SPACE

Our world-leading research is bringing the high frontier within the reach of more people, companies and countries.

OTHER WORLDS

We go above and beyond what we can see to explore the digital and virtual worlds we will increasingly inhabit.



THE FUTURE

Our curious mindset and spirit of innovation means we always stay focused on what's to come.

RESEARCH

THAT CONNECTS

UNIVERSITY OF SURREY HAS A PROUD HISTORY OF COLLABORATION. THE CONNECTIONS WE MAKE ACROSS DISCIPLINES AND DEPARTMENTS, AND WITH OTHER INSTITUTIONS AND INDUSTRY, ENABLE US TO ACHIEVE RESEARCH BREAKTHROUGHS THAT MAKE A DIFFERENCE TO SOCIETY.

We live at a time of great change and uncertainty, when challenge and complexity are juxtaposed with opportunity. Many contemporary research challenges require approaches coming from different angles, disciplines, perspectives and cultures.

This kind of diversity of approach is second nature at Surrey. We have a strong focus on interdisciplinarity and a natural predisposition to openness and cooperation. Academics from across the fields of science, engineering, business, social sciences and the humanities regularly work together with exceptional outcomes.

Our research on Artificial Intelligence, for example, draws on knowledge from electrical and electronic engineering, computer science, business, law and health sciences. This work has led to Surrey being judged world leading in many different aspects of this rapidly developing technological field, with computer vision being just one example.

At Surrey our focus is on exploring global challenges with cross-cutting themes, such as sustainability, urban living and lifelong health. We work with partners in government and industry, nationally and internationally, to bring about innovations which will benefit society and the economy – from theoretical thinking through to fully commercialised technologies.

There are many examples of this across the University. We host the UK's largest research centre in 5G and 6G – which is developing the communications infrastructure that will underpin the way we communicate, work and live in the future – and are also home to the GCHQ-accredited Surrey Centre for Cyber Security. In 2017, three decades of groundbreaking research on the relationship between nutrition and health won us a coveted Queen's Anniversary Prize, while our newest School of Veterinary Science is already advancing research for the improvement of animal welfare, consistent with a broader 'one-health' agenda.

This research excellence is also at the heart of what we offer at Surrey in terms of teaching, adding real-world relevance and unique content to our undergraduate and masters courses, and enabling our PhD students to benefit from a world class research environment. We are proud to welcome high calibre young researchers to our community as they begin their academic careers, and even prouder to see them moving.

EDUCATION

THAT INSPIRES

WE ARE PROUD OF OUR TEACHING EXCELLENCE FRAMEWORK (TEF) GOLD AWARD HERE AT THE UNIVERSITY. WE DELIVER TO OVER 17,000 STUDENTS FROM ALL OVER THE WORLD ACROSS THREE FACULTIES, AND 23 DEPARTMENTS AND SCHOOLS, IN SUBJECTS RANGING FROM MUSIC AND MEDIA TO AEROSPACE ENGINEERING AND ALL THE WAY TO VETERINARY MEDICINE.

Education at the University of Surrey is led strategically by our Pro-Vice-Chancellor Education, Professor Osama Khan, supported and led in each Faculty by the Executive Deans, Associate Deans Education and by Directors of Learning and Teaching in each School and Department. Our Education and Students Experience Strategies drive our continued enhancement of our pedagogical practices and improvements in the students' experience. Students' voice is integral in reviewing and shaping their educational experience and learning environment. The University and Students' Union (SU) work collaboratively to ensure that students contribute to key quality assurance and enhancement processes. Our strategies ensure that our courses are embedded with graduate attributes of – Employability – Global and Cultural Capabilities – Digital Capabilities – Sustainability – Resourcefulness and Resilience, distinguishing our graduates in a crowded marketplace.

Across all Faculties, curricula are strongly shaped by staff research expertise, providing opportunities for students to develop their critical analytic and evaluative skills through active engagement with or participation in research, with two-thirds of our students studying on professionally accredited courses.

EDUCATION

THAT INSPIRES

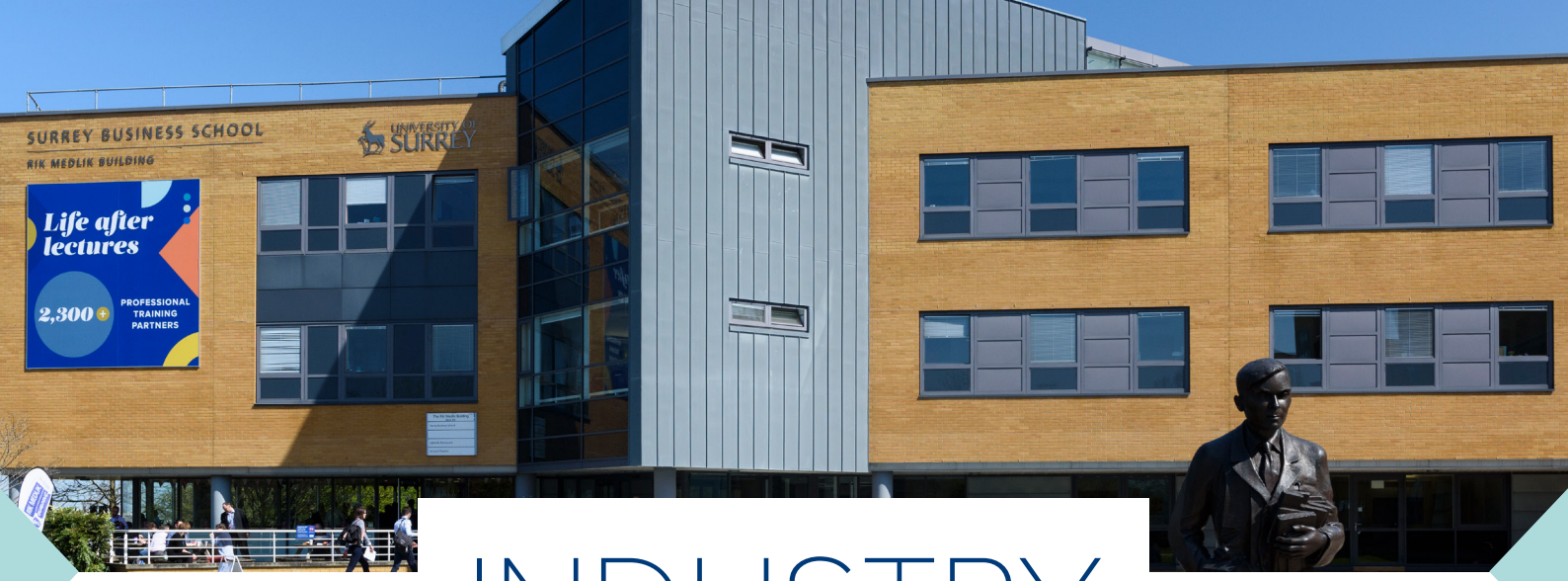
Our Surrey Institute of Education (SIoE) drives the pedagogical practices of the University and undertakes and draws on pedagogical research to develop our Learning and Teaching (L&T) policies and practices. Integrated in SIoE is Digital Learning which promotes and supports the innovative use of educational technology to enhance the student learning experience. Another team known as Educational Development and Research within the SIoE supports curriculum development, enhancement, pedagogic innovation and evaluative research. We are submitting our impactful collective educational and pedagogic research outputs within the current REF. We have a L&T career pathway with SIoE supporting staff to obtain Advance HE fellowships, placing the University above sector average for staff with fellowships (c. 50%). SIoE has also supported many of our academics to become National Teaching Fellows. Each year the University celebrates distinction in teaching through annual award schemes including the Vice- Chancellor's Teaching Excellence Award, the SU-led annual Academic Staff Member of the Year Award and the Lewis Elton Award for innovative teaching.

Through SIoE's excellence we instigated a rapid move to online learning to cope with COVID-19 and developed our plans for Hybrid Education this year, which has so far enabled our students to receive nearly 50% of face-to-face contact time along with support on our virtual learning platform.

In the last five years the University has made more than £100m capital investment in developing and updating physical learning spaces to meet the needs of our expanding student population, for example, new buildings in our campus; Library upgrade to increase study and educational development spaces (now in excess of 1700); and installing latest technologies in teaching spaces. Our Library expenditure (85% spent on digital resources) is within the top 30 nationally (SCONUL), ensuring that students benefit from learning resources and learning development that support both teaching and research. We have recently launched a digital bookshelf, through BibliU, to provide all students with their own digital copies of key texts needed in each year's study.

We have recently developed the new MySurrey concept to refresh student experience and support. MySurrey Hives provide access to immediate support and advice on student life-related queries, and also provide somewhere to meet friends for informal study and to socialise; Academic Hives, based in the Faculties, provide support relating to courses and advice on assessment issues; MySurrey Nest, a modern, homely environment for rest and relaxation on the Stag Hill campus; and MySurrey Voice provides a social media style platform to enable open dialogue between academic and support staff and students.

Our award-winning Employability and Careers Centre (National University Employability Award 2020) supports over 60% of students in professional training including PTY; encouraged by our Graduate Employability Award and Surrey Pathfinder, online employability and careers resources; and peer-to-peer placement finding support. The most recent HESA return figures showed us ranked 12th nationally with the percentage of leavers in work and/or further study six months after graduation at 96%, with 84% in graduate level employment, ranking the University 9th in the UK for graduates in high skilled jobs.



INDUSTRY

LINKS

THROUGH OUR CONNECTIONS WITH BUSINESSES, WE CONSTANTLY STRIVE TO INCREASE EMPLOYMENT OPPORTUNITIES FOR OUR STUDENTS BY OFFERING PROFESSIONAL TRAINING PLACEMENTS ON MANY COURSES AND INITIATIVES FOR START-UP BUSINESSES AT SURREY RESEARCH PARK.

Supporting students into Professional Training

Our Professional Training placements are built on the University's long heritage of sandwich degrees and give students a valuable head-start when looking for graduate jobs. They provide students the opportunity to develop their professional, academic and personal potential, equipping them to be adaptable, resilient, globally minded, confident, entrepreneurial and digitally savvy in the workplace.

These qualities are widely recognised by employers and a significant proportion of placement students at Surrey are offered graduate-level jobs or go onto postgraduate study.

2019 saw 1,249 students on placement in the UK, Europe and around the world – the highest number for the last five years.

Surrey Research Park

The award-winning Surrey Research Park is a major centre of excellence in technology, science, health and engineering for all sizes of business from start-ups to multinationals.

As a University of Surrey Enterprise, the Park delivers added value with our outstanding enterprise ecosystem – from our incubation hub and research and development funding initiatives to recruitment and training support.

All of this within a vibrant community of cluster sectors that collaborate and inspire to make a difference. The Research Park has been a place of innovation and collaboration between business and the University for more than 35 years.

The Park is self-funding, contributes financially to the University and currently has 170 companies within 31 buildings. Our incubation building, the Surrey Technology Centre, supports young technology-based businesses on low-risk short term licences, and is also home to SETsquared (Surrey), rated the global number one business incubator. The offer to tenants ranges from providing a virtual office and co-working open-plan desks to fully managed buildings or long leaseholds.

Thought leaders throughout academia view research parks as a key University activity because in today's economy, entrepreneurs bring economic value to all. The challenge is to drive the knowledge transfer activity in a way that business understands and can value. The role of the Park at Surrey as part of the Research and Innovation portfolio reflects that priority.

EQUALITY, DIVERSITY AND INCLUSION

AT SURREY, WE ARE VERY PROUD OF THE DIVERSITY WITHIN OUR COMMUNITY AND ARE COMMITTED TO PROVIDING AN INCLUSIVE ENVIRONMENT THAT OFFERS EQUITABLE OPPORTUNITIES FOR ALL.

We strive for Surrey to be a place where everyone feels welcomed, valued and safe. Our vision to be a leading global university relies on our proven ability to attract the best people from the UK and internationally to work and study here; this can only be achieved when we work together to create a truly inclusive culture.

Our Equality, Diversity and Inclusion (EDI) Plan 2020-2025 lays out our aims to develop our inclusive and supportive culture, eliminate discrimination, harassment and victimisation, and advance equality of opportunities. Across University of Surrey, we are working actively towards fulfilling our EDI Plan targets and encourage everyone to engage with and participate in its progress. To achieve culture change, we are working to embed EDI in all teaching and learning, research and partnerships, as well as supporting our professional services colleagues. This will enable a self-sustaining process that will support EDI in becoming 'second nature' for our community.

We are proud members of the Race Equality Charter and the Athena SWAN Charter for gender equality (holding University and departmental awards). We are also a Stonewall Diversity Champion and a committed Disability Confident employer. Our AccessAble app provides accessibility support to people who need it around our campus and we have thriving staff networks and equality groups that support our work in all our areas of equality (gender, race/ethnicity, LGBTQI+, disability and faith).

Athena SWAN Bronze Award

disability confident COMMITTED

Stonewall DIVERSITY CHAMPION

Race Equality Charter RACE CHARTER

INTRODUCING

FACULTY OF ENGINEERING AND PHYSICAL SCIENCES

THE FACULTY OF ENGINEERING AND PHYSICAL SCIENCES (FEPS) IS ONE OF THREE FACULTIES AT SURREY, AND COVERS THE CORE ENGINEERING DISCIPLINES OF AERONAUTICAL ENGINEERING, CIVIL ENGINEERING, CHEMICAL ENGINEERING, ELECTRICAL AND ELECTRONIC ENGINEERING AND MECHANICAL ENGINEERING, ALONGSIDE THE SPECIFIC DISCIPLINES OF CHEMISTRY, COMPUTER SCIENCE, MATHEMATICS AND PHYSICS.

The Faculty embraces a vibrant education network whereby teaching and learning developments across all areas are shared, explored and advanced. Its electrical and electronic engineering courses are ranked number six and chemistry courses are ranked in the top ten in the Guardian University Guide 2021, while its materials technology courses are ranked number three in the Complete University Guide 2021.

Staff within the Faculty are well respected throughout academia and industry, where links are strong, and drive the belief that a university should contribute to the mainstay sciences while enhancing the technology to improve overall quality of life. Through consistent investment stemming from a deep commitment to develop world-class, sustainable research programmes, the Faculty has built up an impressive infrastructure to support all its activities. The interdisciplinary nature of much of the work also provides opportunities to cross boundaries and offers students the prospect of accessing exceptional facilities.

SCHOOL OF

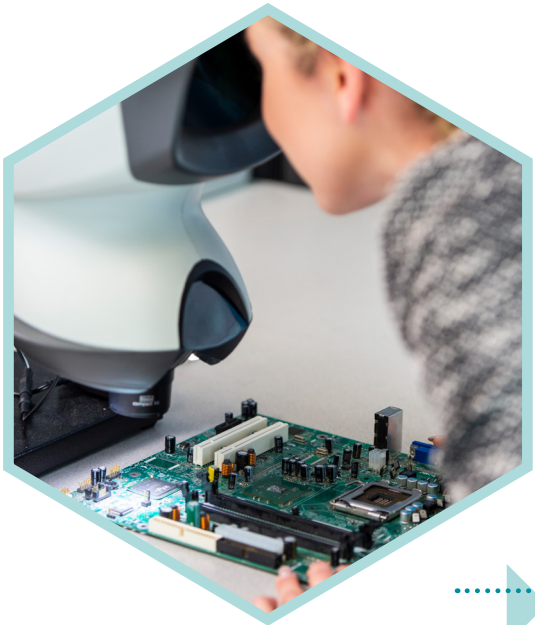
COMPUTER SCIENCE AND ELECTRONIC ENGINEERING

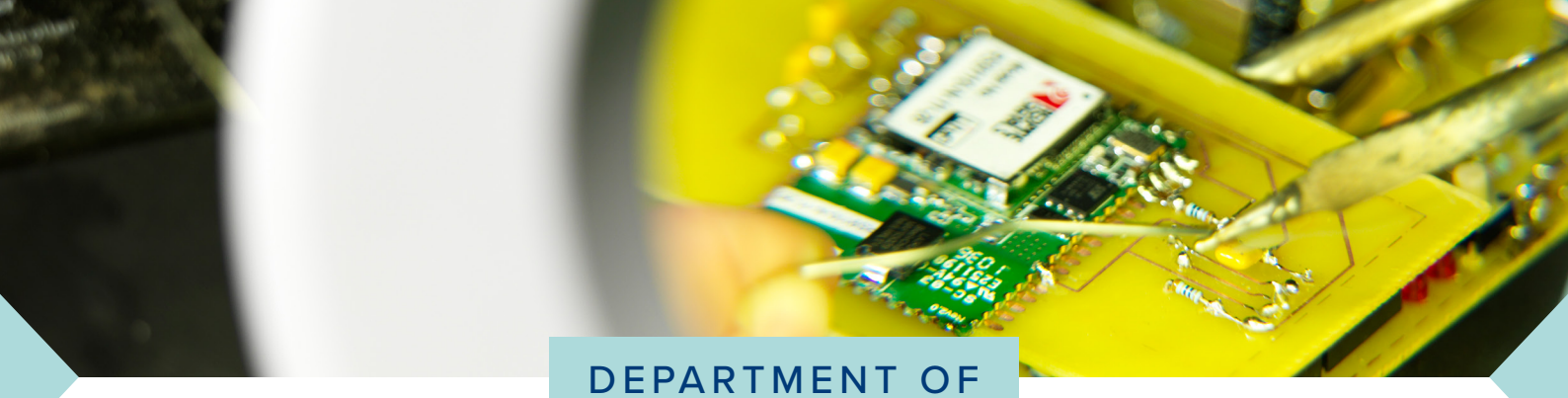
COMPRISING THE DEPARTMENT OF COMPUTER SCIENCE AND THE DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING.

The School of Computer Science and Electronic Engineering draws on the synergies between the two subjects to deliver outstanding teaching and world-leading research in fields such as computer vision and machine learning, AI, audio-visual machine perception, autonomous vehicles, cyber security, 5G technologies, blockchain, virtual reality, gaming and smart health. The School encompasses the Department of Electrical and Electronic Engineering and the Department of Computer Science.

The Department of Electrical and Electronic Engineering has been ranked one of the best in the UK for many years. Research is carried out in several large research centres and groups with cross cutting themes including the Advanced Technology Institute (ATI), the Centre for Vision, Speech and Signal Processing (CVSSP), the Institute for Communication Systems (ICS), and the Surrey Space Centre (SSC). The ATI brings together researchers with an international outlook in Quantum Information, Nanotechnology, Energy and Advanced Materials; CVSSP is an internationally recognised leader in audio-visual machine perception, machine learning and AI research. ICS is the home of the 5G Innovation Centre, is the largest academic research centre in the UK specialising in information and communication technology and satellite communications.

The Surrey Space Centre (SSC) is one of the World's leading Centres of Excellence in space engineering, and has pioneered the development of low-cost satellites. The Department provides excellent opportunities for students and researchers alike to access a wide range of facilities devoted to robotics, artificial intelligence, machine learning, audio-visual processing, security, energy conversion, space missions, healthcare and nanomaterials, amongst others. All members of academic staff have both teaching and research responsibilities.





DEPARTMENT OF

COMPUTER SCIENCE

THE DEPARTMENT OF COMPUTER SCIENCE HAS A LONG-STANDING REPUTATION FOR ITS VIBRANT AND SUPPORTIVE TEACHING AND RESEARCH ENVIRONMENT. WE HAVE A GROWING COMPLEMENT OF AROUND 30 ACADEMIC STAFF, AND A CURRENT PROFILE OF 400+ UNDERGRADUATE STUDENTS, 100+ MASTERS STUDENTS, AND 40+ PHD STUDENTS.

Our Computer Science BSc and Computing and Information Technology BSc programmes have been running successfully for many years and continue to attract strong students. The Department offers Information Security MSc and Data Science MSc programmes with healthy student numbers.

The Department of Computer Science has a world-class reputation in Cyber Security, Distributed and Networked Systems, and Nature Inspired Computing & Engineering, and regularly publishes at top-level conferences and journals.

The Surrey Centre for Cyber Security (SCCS) is one of only seven in the UK holding recognition as an Academic Centre of Excellence in both Cyber Security Research and Cyber Security Education by the UK government. SCCS has world-leading research expertise in applied cryptography, trusted computing, secure systems, privacy and authentication, secure communications, blockchain and distributed ledger technologies, and security verification.

The Distributed and Networked Systems (DANS) group is internationally recognised for its fundamental and applied research in several areas such as consensus protocols, distributed trust and coordination, fault-tolerance, edge and cloud computing, networks in space, web tracking and privacy, online harms such as hate speech and misinformation in social networks.

The Nature Inspired Computing and Engineering (NICE) group holds world-leading expertise in machine learning and AI, including trustworthy AI (explainable, secure and privacy preserving machine learning), systems biology, bioinformatics, image processing, natural language processing, computational neuroscience, computational optimization, AI planning and optimal control. The NICE group is a key partner in the new Surrey Institute for People-Centred AI.

All research groups maintain close links with leading industries, the public sector and governmental bodies, leading to a strong heritage of real-world impact. As part of the School of Computer Science and Electronic Engineering, we also have strong links with other Research Centres in the School, including the Centre for Vision Speech and Signal Processing, the Institute for Communication Systems, and the Surrey Space Centre.

The Department has made significant investment in its facilities with a new 200-seater computer science teaching laboratory, a virtual cloud computing platform, a secure systems facility and an HPC cluster for research. Other state-of-the-art facilities include a distributed RDMA/SGX/NVM testbed, P4 testbed for programmable networks, UK's first testbed for space networks to emulate megaconstellations of LEO satellites (in collaboration with the Surrey Space Centre), high-performance computing cluster for data analysis, Surrey Blockchain Testbed, and 5G/6G wireless network testbeds.

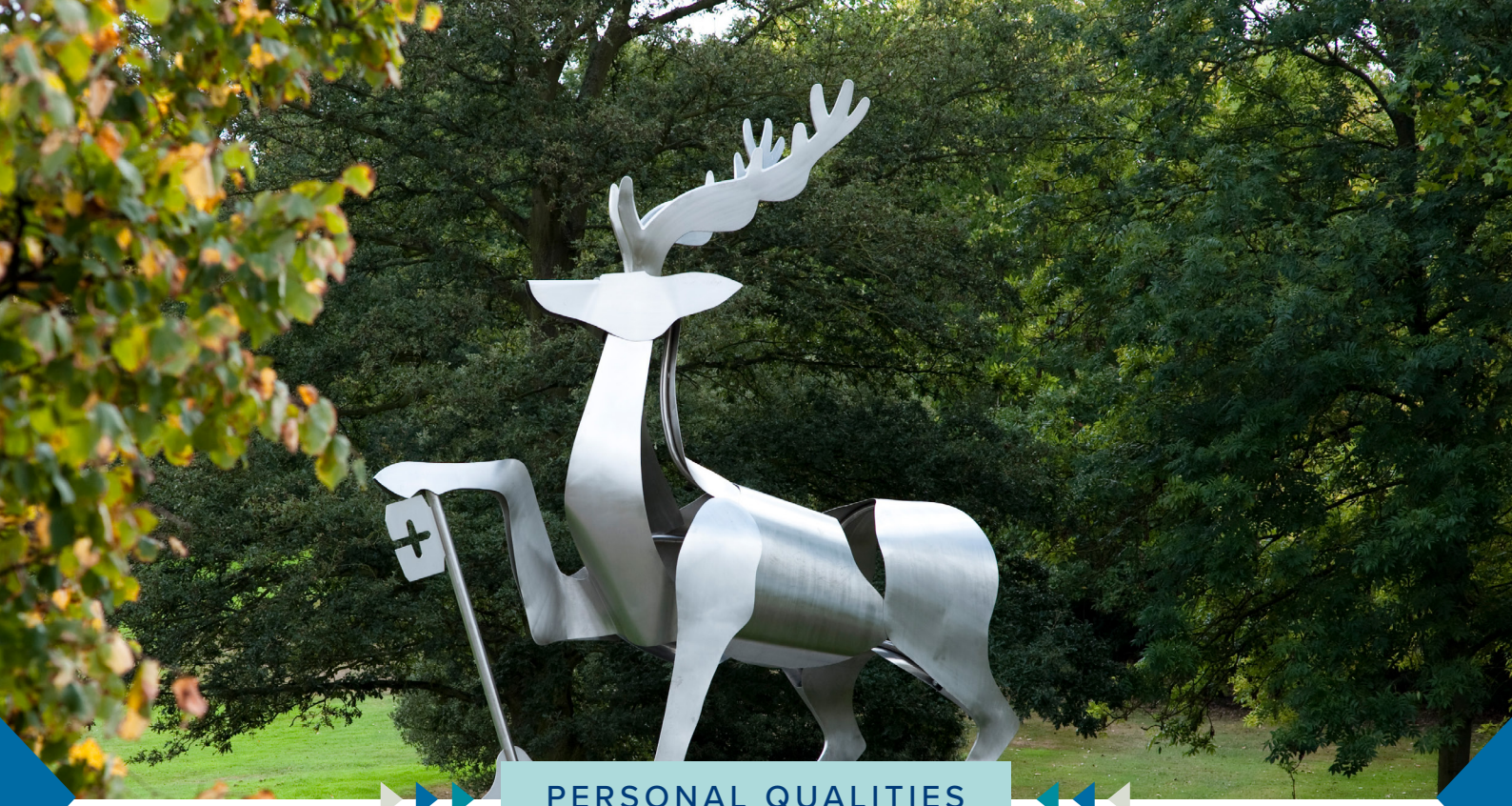
HEAD OF DEPARTMENT OF

COMPUTER SCIENCE

THIS POST REPRESENTS AN EXCITING OPPORTUNITY TO LEAD A GROWING DEPARTMENT, DEVELOPING AND IMPLEMENTING ITS FUTURE STRATEGY, FURTHER ENHANCING ITS RESEARCH PROFILE, AND ENSURING STUDENTS AT ALL LEVELS RECEIVE AN OUTSTANDING EXPERIENCE. YOU WILL BRING EXPERIENCE, DRIVE AND ASPIRATIONAL LEADERSHIP TO SUPPORT THE MEMBERS OF THE DEPARTMENT TO ACHIEVE THE HIGHEST STANDARDS IN RESEARCH AND TEACHING.

KEY RESPONSIBILITIES

- Lead and manage the Department, developing a strategic plan designed to deliver excellence in both research & innovation and learning & teaching, in line with University strategy
- Continuing in your success to date as a world leading academic, using your leadership ability to drive the teaching and research direction, impact and sustainability of Computer Science at Surrey
- Represent the Department in a range of high-profile contexts, internationally, nationally, and across the University of Surrey
- Sustain an outstanding track record of publication of high quality research findings in primary journals and international conferences
- Maintain an excellent level of research funding, leading and coordinating large multi-disciplinary or multi-Faculty bids involving collaborative groups
- Engage with and influence industry, government and similar institutions at the highest levels, to enhance the reputation of the Department, maintain and develop key partnerships, and secure funding for future projects
- Manage resource planning associated with the Department
- Mentor junior colleagues to develop their research potential and support their career development
- Provide academic leadership at undergraduate and postgraduate level, taking an active role in planning and delivering teaching and assessment activities
- Perform administrative duties throughout the Department, School, Faculty and/or University, contributing to the general life and work of the University.



PERSONAL QUALITIES

As a pioneering leader, you will have outstanding interpersonal skills, able to both listen to and inspire others, engaging your stakeholders with your clear strategy to grow and sustain a collegial and inclusive teaching and research environment. You will be a role model for our University values, leading by both personal example and team relationships, striving to ensure that excellence permeates each and activity within the Department. You will have the ability to foster networks which enable applied/commercialisation activity inside and outside of the discipline.

QUALIFICATIONS AND EXPERIENCE

- **Higher research degree (PhD) in in Computer Science or a related discipline, or equivalent research experience**
- **Leadership and management experience, including developing and delivering strategies to enhance the positioning and impact of a School, Department or Research Group**
- **Outstanding research and publication track record at a national and international level, which have made a significant contribution to advancing knowledge**
- **Strong track record of leading successful research proposals, securing research income and supervising PhD students**
- **Familiarity with development, delivery and assessment of teaching programme units**
- **Experience of working with partners in industry, academia and other professional bodies, and a strong network of collaborators**
- **A track record in line management, ideally at research group or department level**
- **Excellent interpersonal, communication, motivational and team working skills, commensurate with leading an academic Department.**

HOW TO APPLY

To make a formal application, please visit **https://jobs.surrey.ac.uk/vacancy.aspx?ref=083821**

Applications should include a CV with list of publications (no page limit) and a supporting statement outlining the skills and experience which you feel you would bring to the role (2 pages max).

The closing date for applications is 22 February 2022 and interviews will be held on 11 March 2022.

Applicants are welcome to contact Prof Mark Plumbley, Head of School of Computer Science and Electronic Engineering (**m.plumbley@surrey.ac.uk**) for further information or to discuss the post.

University of Surrey is committed to providing an inclusive environment that offers equal opportunities for all. We place great value on diversity and are seeking to increase diversity in our community. Therefore, we particularly encourage applications from under-represented groups such as people from Black, Asian and minority ethnic backgrounds, women and people with disabilities.

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